

Department of Energy

4229



Ohio Field Office
Fernald Area Office

P. O. Box 538705
Cincinnati, Ohio 45253-8705
(513) 648-3155

APR 15 2002

Mr. James A. Saric, Remedial Project Manager
United States Environmental Protection Agency
Region V, SRF-5J
77 West Jackson Boulevard
Chicago, IL 60604-3590

DOE-0431-02

Mr. Tom Schneider, Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, OH 45402-2911

Dear Mr. Saric and Mr. Schneider:

**TRANSMITTAL OF PROJECT SPECIFIC PLAN FOR THE ANALYSIS OF URANIUM
SORPTION AND PARTITIONING ON GREAT MIAMI AQUIFER MATRIX SEDIMENTS**

Enclosed please find the subject Project Specific Plan (PSP) for your review and approval. This plan serves as the controlling document for conducting the analysis of how uranium is adsorbed and partitioned onto Great Miami Aquifer (GMA) sediments. Detailed information on how uranium is adsorbed or partitioned with the aquifer matrix is not available. Of particular interest is the uranium fraction that is readily exchangeable or bound with such compounds as the carbonate minerals, metal oxides, metal hydroxides, and organic matter. Uranium that is present on the surface of the sediment components may be able to participate in adsorption/desorption reactions; whereas, uranium that is encapsulated within the individual sediment grains are more likely to be permanently bound within the sediment grain. Groundwater cleanup predictions to date have assumed that the aquifer is in equilibrium with respect to sorption and desorption of uranium. This equilibrium assumption may not be correct and, hence, a disequilibrium approach may be required in order to improve the accuracy of the cleanup predictions. The implementation of the enclosed PSP should provide the information necessary to determine if a disequilibrium modeling approach is necessary to improve the accuracy of the aquifer restoration cleanup time.

Mr. James A. Saric
Mr. Tom Schneider

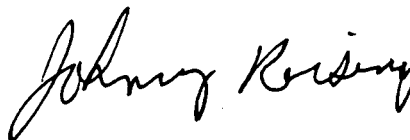
-2-

APR 15 2002

DOE-0431-02

If you or your staff have any questions, please feel free to contact Robert Janke at (513) 648-3124.

Sincerely,



Johnny W. Reising
Fernald Remedial Action
Project Manager

FEMP: R.J. Janke

Enclosure: As Stated

cc w/enclosure:

R. Greenberg, EM-31/CLOV

T. Schneider, OEPA-Dayton (three copies of enclosure)

M. Wojciechowski, Tetra Tech

AR Coordinator, Fluor Fernald, Inc./MS78

cc w/o enclosure:

R. J. Janke, OH/FEMP

A. Tanner, OH/FEMP

J. D. Chiou, Fluor Fernald, Inc./MS64

M. Jewett, Fluor Fernald, Inc./MS52-2

ECDC, Fluor Fernald, Inc./MS52-7